

The Groundplane

DINNER LOCATION — CHILI GARDEN RESTAURANT 6 PM

SEPTEMBER 2006 VOLUME 7 ISSUE 9

Celebrate Fremont

Are you ready for the operating event as big as one can imagine? Well Celebrate Fremont begins on the 9th at Central Park. SBARA will be using Special Event call W50 for the 2 day event!

Everyone is invited to come and operate the event on Saturday or Sunday or both days. SBARA will be located in the area by the old Swim Lagoon and should give us a good path in all directions. We are planning on operating both HF and VHF plus something I know I have never Bring you HT if you have one and be prepared to "talk" on the bands.

seen before, ATV Television. Our plan includes 20, 40, 75, and 2 meter all SSB operation. We'll even have a California Kilowatt so that we will be heard around the World! Not only are we going to operate we are also going to tell the public about Amateur Radio. This will be a good opportunity to "share" our hobby and pastime.

SBARA will be in the section called Tomorrow. This is the

area where the future direction of the City will be planned and decided over the coming months and years – so I am really looking forward to our licensed Youth and Children within our membership to help man the stations.

We are creating a unique QSL card for this event – similar to other sought after certificates.

To make this a success and to really put on a good show I am looking for of operators for HF and VHF. Not only are we going to work a bunch of contacts but we need some members to visit with people to our tent area. With all the press attending here's your chance to get on TV or in the Newspaper! SBARA is entrusted with KU6S so any level of licensee will be able to operate.

We look forward to YOU helping out with this BIG event.

SBARA Committee Members — Steve Wilson, Brad Douglas, Al Rendon, Jeff Kroger, and Bill Artelt

Operating Frequencies - 3.900, 7.235, 14.245, and 144.210Mhz.

Bill, WB9YVM Event Chair



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SBARA Dinner
Chili Garden
3241 Walnut Ave-

Articles of Interest

Celebrate Fremont
Fire Department CERT

Happenings — By Steve Wilson — KA6S

September 8	7:30 PM	SBARA General Meeting
September 9	5:00 AM	Foothill Flea Market
September 11	7:00 PM	Sunnyvale VEC Exam – Fremont
September 9 -10	Multi Day Event	Celebrate Fremont 50
September 15 -18	Multi Day Event	Harvest Hamvention
September 16	6:00 PM	Transmitter Hunt (Foxes choice)
September 16 - October 3	Multi Week Festival	Oktoberfest Festival— Munchen, Deutschland
October 1	7:00 AM	Livermore Swap meet
October 7	5:00 pm	Transmitter Hunt
October 9	7:00 PM	Sunnyvale VEC Exam - Fremont
October 13	7:30 PM	SBARA General Meeting
October 13—15	Multi Day event	PACIFICON
October 14	5:00 AM	Foothill Flea Market
October 21	6:00 PM	Transmitter Hunt (Foxes choice)
October 28	2:00 AM	Daylight Savings Ends
October 31	All Day	Halloween

WELCOME TO SPECIAL EVENT STATION W5O

W5O and SBARA welcome you to our Special Events station! Our event commemorates the incorporation of Fremont, California 50th years ago. Fremont was incorporated in January 1956. Five historic districts; Mission San Jose, Niles, Center-

ville, Irvington, and Warm Springs comprise our city. Fremont is the largest square mile city in the state of California. Each of the districts are rich in local, and state historical history from the Native Americans, The Ohlone to Champagne Vineyards by the Wiebels. Fremont is rich in history.

Treasurer Note, August 2006 — Bernhard, DL4MHK/W6

Dear SBARA Members

Lot's of news this time! We had a SBARA Board meeting on Aug 3rd, and some decisions were made.

Membership Renewals, New Membership Model

Most important, SBARA does no longer accept membership renewals after March 31st. Late payments require a late fee of ten dollars to be added, i.e. the amount a new member must pay:

Membership type	In time payment	Late payment
Regular	\$ 20.00	\$ 30.00
Family	\$ 25.00	\$ 35.00
Seniors	\$ 10.00	\$ 20.00

The Board decided also a prorating for new members. If somebody applies for a new membership (**not membership renewal!**) after Aug 31st of a year, there will be a discount, see table below. If somebody applies after November 14st of a year, the full membership fee applies again, but it is valid for the next year already.

Membership type	Regular	After Aug 31st
Regular	\$ 20.00	\$ 10.00
Family	\$ 25.00	\$ 15.00
Seniors	\$ 10.00	\$ 5.00

Event Station W5O, August 2006 — Bill Artelt, WB9YVM

Sep 9-Sep 10, 1600Z-0030Z, Fremont, CA. South Bay Amateur Radio Association, W5O. SBARA Celebrates Fremont, CA's 50th anniversary. 3.900 7.245 14.245 144.210. QSL. Al Rendon, WT6K, 201 Brunswick Pl, Fremont, CA 94539-6334. www.sbara.org.

The SBARA listing appears within the Contest/Special Event page on the ARRL website—<http://www2.arrl.org/contests/spev.html>

Zucchini Festival Worker Raffle — Bernhard, DL4MHK/W6

It's a Wrap!!!!

We have finally received last year's Zucchini Festival money: it is a very nice four-figure amount of money! It allowed the treasurer to put some money aside into a one-year CD with a nice interest rate.

Many of us have been at the Zucchini Festival again this year again (me too!), providing the necessary communications

between the administration and the entry gates. I'm happy that we could again fill in most of the shifts this year. The Zucchini Festival is probably our most important fund raising activity. SBARA will thank the participants during the September meeting, there will be a special raffle with a Yaesu FT-2800 as prize, each participant will receive one ticket per shift he or she worked on. Looking forward!

CW HF Operations — Bernhard, DL4MHK/W6

SBARA has formed a telegraphy practice round! It was started by Al WT6K and Adam KG6HDR. Bernhard W6/DL4MHK joined quickly in. We are now a good number of interested people, so that we should always be able to start some rag chewing – the best method to brush up your telegraphy skills! We meet

**Tuesday and Thursday on 10 meters,
28.400 MHz**

at 8:30 p.m. to 9:00 – 9:30 p.m.

We encourage slow speed for the newcomers. Accuracy is what is important at first. Join in when you get some practice with a key or paddle and feel comfortable sending about five words per minute. Do not try to send fast, it is not necessary. If Al, Adam and Bernhard are the only ones to show up, the speed is around 10-15

wpm. Don't let that scare you away. When you are ready, send the letters BK DE <your callsign>

We will notify you on the reflectors sbara@mailman.qth.net and sbarahams@yahoogroups.com in case we can't make it. Call and check-in anyways, there might be somebody willing to practice with you.

Looking forward to working you on CW!

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Fremont Fire Department Training — Mary Biggs, KF6GAJ

Fremont Fire Dept.'s Disaster Preparedness Training Program, 2006 Schedule

Register by calling 510-494-4244, FirePubEd@ci.fremont.ca.us, or go to www.FremontCERT.org

Personal Emergency Preparedness (PEP) Training (one class):

A one-time 2.5 hour class about earthquake and disaster awareness, preparing your home and family, storing supplies, shutting off: gas, electric, & water shut-off, identifying hazardous materials, fire extinguisher types, smoke detector placement, sheltering in-place. This is a very informative condensed class, where as CERT is actual hands-on training.

Class Time: 7:00 PM – 9:30 PM

Class location = 3300 Capitol Avenue, Fremont City Hall, Southeast corner of Bldg. A

Class Dates, everyone can attend any one of these classes that suits their schedule:

Wednesday, September 27, 2006

Tuesday, November 7, 2006

If your group would like to schedule your own personal group PEP class at your location,

Contact: **Chuck Guaraglia**, PEP/ Public Education, Fremont Fire Dept., 510-792-3473, guaragliac@aol.com

Community Emergency Response Team (CERT) Training (5 classes, 7:00 – 10:00 PM)

For individuals interested in becoming part of a neighborhood team. CERT training consists of in depth hands on training, including actual fire fighting with an extinguisher, search & rescue, lifting injured people correctly, triage large number of

wounded, building damage assessment, teamwork and responding to fire department's call for help.

Wednesday Nights for Mission and Warm Springs Neighborhoods

October 11, 2006 = Class 1 @ 3300

Capitol Avenue (Fremont City Hall), Southeast Corner of Building A, CERT Training Room = Orientation, CERT ID Badges, Earthquake Preparedness Lecture

October 18, 2006 = On-line CERT class at home, FEMA CERT Independent Study Course, 20 Chapters plus Final Exam:

<http://www.learningservices.us/FEMA/LMS> take IS 317 CERT

October 25, 2006 = Class 2 @ 3300

Capitol Avenue = Exterior Operations, Hazardous Materials Lecture, Utility Control, Exterior Building Damage Assessment, Exterior Search & Rescue, Cribbing (lifting heavy objects using surrounding materials), Fire Suppression

November 1, 2006 = Class 3 @ 3300

Capitol Avenue = Interior Operations, Interior Building Damage Assessment, Interior Search & Rescue, Triage, Victim Movement, Terrorism / Weapons of Mass Destruction Lecture

November 8, 2006 = Class 4 @ 3300

Capitol Avenue = Base of Operation, "Putting it all together", Disaster Psychology, Radio Communications, Incident Command System

November 15, 2006 = Class 5 @ Fire Station 4 for Mission and Fire Station 5 for Warm Springs Disaster Scenario in the neighborhood Field exercise, putting the skills to use, setting up Base of Operations at the Fire Stations.

HPSDR — Software Defined Radio — By Steve Wilson, KA6S

I thought people might be interested in a quick status report on the [HPSDR](#) project concerning progress made since my talk at the August SBARA meeting. If you remember from the talk, there are three major boards that have been fabricated to date. These are the ATLAS mother board, JANUS Sound Card, and the OZY control card.

As of this writing, the first generation cards are considered functional. This means that sound the combined system can replace a PC sound card, and provide the sound via USB connectivity for an existing [Flex-Radio SDR-1000](#) system. A second version of both the JANUS and OZY cards are being produced with minor fixes as a Beta run prior to full kitting. This is to allow TAPR to get experience in dealing with the cards and to work out any issues with what is hoped to be the final version of each card.

Now for the card I'm helping with, i.e. the Mercury card. The Mercury card is an FPGA based card that has a high-speed A/D converter running at 100 Mega Samples per second feeding the FPGA. The FPGA will implement a Digital Down Converter with programmable frequency that can send the Quadrature data over the ATLAS bus to OZY/JANUS which in turn send the sound data to the PC. This would allow implementation of a digital 50Mhz receiver.

As of last night (September 1, 2006), Phil Harman, VK6APH has the basic Digital Down Converter working. He can see an RF signal that he generates on 20M in the SDR-1000 software. He is using a modified version of code that was written by N8VB — with some small help from your's truly in debug of same. Right now it looks

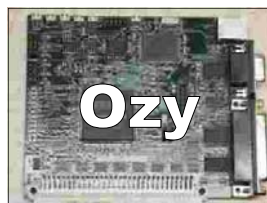
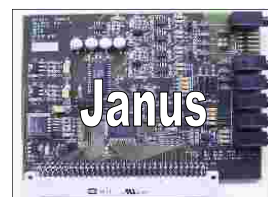
like we aren't doing the quadrature calculation to enough bits of accuracy, so we'll be modifying the code further to increase this. This has a direct correlation to how low the noise floor is, consequently is a very desirable thing to do. It's been a BLAST to work on this, and I'm learning a lot about digital signal processing as part of the effort.

Some interesting recent ideas kicked around on the reflector are adding a few parts and implementing a Network analyzer similar to the one AI showed not to long ago. Another interesting idea was to use multiple radios with multiple antennas and do phased-array reception/ transmission— with the phasing occurring inside the PC software! You could have steerable beams by just altering the waveform phase you are sending to each radio!

It seems that the possibilities for Software Defined Radios are nearly limitless!

Stay tuned for more interesting developments.

Current Design Modules



September Meeting Raffle — By Gene Arrillaga, KF6ZYL

The September raffle features a G5RV antenna from RadioWavz and the Emergency Power for radio communications from ARRL.

THE G5RV ANTENNA, with its special feeder arrangement, is a multiband center-fed antenna capable of very efficient operation on all hf bands from 3.5 to 28mhz, specifically designed with dimensions which allow it to be installed in gardens which accommodate a reasonably-straight run of about 102ft (31.1m) for the "flat-top". However, because the most useful radiation from a horizontal or inverted-V resonant antenna takes place from the center two-thirds of its total length, up to one-sixth of this total length at each end of the antenna may be dropped vertically, semi-vertically, or bent at some convenient angle to the main body of the antenna without significant loss of effective radiation efficiency. The G5RV is made with of high quality UV insulated copper clad steel wire on the top and a heavy duty 300 ohm ladder line.

Emergency Power for radio communications Use this book to plan ways to stay on the air when weather or other reasons

cause a short-term or long-term power outage.

Find ways to reach beyond the commercial power grid.

Identify methods for alternative power generation that will work best in your particular situation, perhaps taking advantage of possibilities already on hand.

Contents: Keeping the Signals on the Air, Hey, I Am In The Dark: Keeping The Lights On In The Ham Shack With Emergency Power, Solar Power, Charge Controllers for PV Systems, Generators: Gas, Wind and Water, Load Sizing, Holding Your Volts: Battery Systems and Storage, Systems for Emergency Power, Inverters, Station Instrumentation, Safety, Emergency Practices, Wire Size Tables for 12 V and 24 V Photovoltaic Applications, Installing Anderson Powerpole® Connectors. Also includes selected emergency power projects.

Tickets for the September raffle are available for a

\$5 buy in for 5 tickets with additional tickets at \$1 each. SBARA would like to thank HRO for their

SBARA and Halloween present—Design a Ham Pumpkin Contest.

Are you interested in winning? Have you ever carved a Pumpkin before? Then come to the

October meeting and put your design to work. You can carve it, paint it or decorate it any way you like to show us ham radio. The winner will win a prize!!

C U at the October Meeting.

ANAHEIM, CA

(Near Disneyland)
933 N. Euclid St., 92801
(714) 533-7373
(800) 854-6046
Janet, KL7MF, Mgr.
anaheim@hamradio.com

BURBANK, CA

2416 W. Victory Bl., 91506
(818) 842-1786
(800) 854-6046
Eric, KA6IHT, Mgr.
Victory Blvd. at Buena Vista
1 mi. west I-5
burbank@hamradio.com

OAKLAND, CA

2210 Livingston St., 94606
(510) 534-5757
(800) 854-6046
Mark, W17YN, Mgr.
I-880 at 23rd Ave. ramp
oakland@hamradio.com

SAN DIEGO, CA

5375 Kearny Villa Rd., 92123
(858) 560-4900
(800) 854-6046
Tom, KM6K, Mgr.
Hwy. 163 & Claremont Mesa
sandiego@hamradio.com

SUNNYVALE, CA

510 Lawrence Exp. #102, 94085
(408) 736-9496
(800) 854-6046
Rick N6DQ, Co-Mgr.
Howard, W6HOC, Co-Mgr.
So. from Hwy. 101
sunnyvale@hamradio.com

NEW CASTLE, DE

(Near Philadelphia)
1509 N. Dupont Hwy., 19720
(302) 322-7092
(800) 644-4476
Rick, K3TL, Mgr.
RT.13 1/4 mi., So. I-295
newcastle@hamradio.com

PORTLAND, OR

11705 S.W. Pacific Hwy.
97223
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Leon, W7AD, Mgr.
Tigard-99W exit
from Hwy. 5 & 217
portland@hamradio.com

DENVER, CO

8400 E. Iliff Ave. #9, 80231
(303) 745-7373
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Joe, KD0GA, Co-Mgr.
John, N5EHP, Co-Mgr.
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PHOENIX, AZ

1939 W. Dunlap Ave., 85021
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Gary, N7GJ, Mgr.
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phoenix@hamradio.com

ATLANTA, GA

6071 Buford Hwy., 30340
(770) 263-0700
(800) 444-7927
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Doraville, 1 mi. no. of I-285
atlanta@hamradio.com

WOODBRIIDGE, VA

(Near Washington D.C.)
14803 Build America Dr. 22191
(703) 643-1063
(800) 444-4799
Steve, N4SR, Mgr.
Exit 161, I-95, So. to US 1
woodbridge@hamradio.com

SALEM, NH

(Near Boston)
224 N. Broadway, 03079
(603) 898-3750
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- Front Panel GPS in • Rear DB-9 port
- CTCSS/DCS Encode/Decode built in

Low Pricing!

Handy Web Links

SBARA Web Site	http://www.sbara.org
ARRL Main Site	http://www.arrl.org/
ARRL SCV Division	http://www.arrl.org/sections/SCV.html
ARRL East Bay Section	http://www.pdarrrl.org/ebsec/index.html
ARRL Contest Page	http://www.arrl.org/contests
Contest Calendar	http://www.hornucopia.com/contestcal
Callsign Lookup (QRZ)	http://www.qrz.com/
Vanity Callsign Info	http://www.vanityhq.com/
IRLP Main Page	http://www.irlp.net/
AMSAT	http://www.amsat.org/
FCC Services	http://wireless.fcc.gov/services/amateur

SBARA on the Internet

<http://www.sbara.org>

On the Air at 147.015 + PL 103.5

Fremont Repeaters & Net Information

WA6PWW - 147.015 +600Khz, PL 103.5
 WA6PWW - 223.900 -500Khz, PL 107.2
 WA6PWW - 442.600 +5Mhz, PL 107.2
 N6OXR - 146.940 -600Khz, PL 123.0
 N6OXR - 441.525 +5Mhz, PL 123.0

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 Sam Severs, WS6S
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ANNOUNCEMENTS

SBARA monthly meeting:
September 8th.
Veterans Hall in Niles



*Support Your Club Come to
Celebrate Fremont*

The Ground Plane — KU6S
<http://www.sbara.org>
South Bay Amateur Radio Association — SBARA
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